

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 1-23 are presently active in this case. In the present amendment, new Claims 22 and 23 are added. Support for the present amendment can be found in the originally filed specification, for example, at page 5, lines 8-16, and page 6, lines 1-16, in addition to Figures 3 and 4. Thus, it is respectfully submitted that no new matter is added.

In the outstanding Office Action, Claims 1-9, 12, 14-17, 20, and 21 were rejected under 35 U.S.C. § 102(b) as anticipated by Suzuki (U.S. Patent No. 4,660,269); Claims 10, 11, and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over Suzuki in view of Fujii (U.S. Patent No. 5,987,973); and Claims 18 and 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over Suzuki in view of Cooper (U.S. Patent No. 4,512,441).

Turning now to the cited references, Suzuki describes a process for producing a built-up cam shaft. However, it is respectfully submitted that Suzuki does not disclose or suggest a support shaft that is “configured to capture the cam shaft element thereon by *a head of a rivet* formed of a plastically deformed portion at said *end* of said support shaft,” as recited in Claim 1. On the contrary, Suzuki explicitly teaches that it is not *an end surface* of the shaft 2 that plastically deforms.¹ Instead, portions of the hollow shaft 7, 8, and 9, which are not at the end of the shaft 2, undergo plastic deformation due to a hydrostatic pressure.² Additionally, Suzuki describes that the hollow shaft shrinks in overall length such that an end surface of the shaft 2 is spaced apart from the bottom surface 15 of the cap 4.³ A person of ordinary skill in the art would understand that a rivet is not deformed due to hydrostatic pressure and that the head of the rivet is deformed the most at an end surface thereof.

¹ See Suzuki at Figure 2, with corresponding description.

² See Suzuki, at column 4, lines 40-55.

³ See Suzuki, at column 4, lines 40-62.

Furthermore, there is no evidence for a motivation to modify the teachings from Suzuki to arrive at Applicants' claimed inventions. The position that these teachings could be modified to arrive at the claimed inventions would be insufficient to establish a *prima facie* case of obviousness. Additionally, it is not clear how such modification could be achieved without a substantial reconstruction or redesign of the systems disclosed by these references. All of the embodiments described in Suzuki show that the end of the shaft 2 either is not deformed or deforms radially inwardly to form a tight seal with the end cap 4.⁴ As discussed above, the end surface of a rivet is deformed outwardly.

Thus, Suzuki fails to disclose or suggest every feature recited in Claim 1. Specifically, Suzuki does not disclose or suggest a support shaft that is "configured to capture the cam shaft element thereon by a *head of a rivet* formed of a plastically deformed portion at said *end* of said support shaft," as recited in Claim 1. Thus, Claim 1, and all claims dependent thereon, are patentably distinct over Suzuki. Accordingly, Applicants respectfully request reconsideration of the rejection of Claims 1-9, 12, 14, and 21 as anticipated by Suzuki.

Although Claim 15 is directed to an alternative embodiment, it is respectfully submitted that Claim 15 recites features similar to those discussed above with respect to Claim 1. Therefore, it is respectfully submitted that Claim 15, and Claims 16, 17, and 20 which depend therefrom, patentably define over Suzuki for at least the reasons discussed above.

With regard to the rejection of Claims 10, 11, and 13 as unpatentable over Suzuki in view of Fujii, and the rejection of Claims 18 and 19 as unpatentable over Suzuki in view of Cooper, it is noted that Claims 10, 11, and 13 are dependent from Claim 1, and Claims 18 and 19 are dependent from Claim 15, and thus are believed to be patentable for at least the

⁴ See Suzuki, at Figures 1, 2, 4, 5, 7, 9, 10, 11, and 12, with their corresponding descriptions.

reasons discussed above. Furthermore, it is respectfully submitted that neither Fujii nor Cooper cures any of the above-noted deficiencies of Suzuki. Accordingly, it is respectfully submitted that Claims 10, 11, and 13 are patentable over Suzuki in view of Fujii, and Claims 18 and 19 are patentable over Suzuki in view of Cooper.

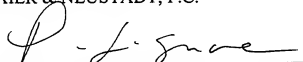
New Claims 22 and 23 find support in the originally filed specification, for example, at page 5, lines 1-16, and page 6, lines 1-16, in addition to Figures 3 and 4. Thus, it is respectfully submitted that no new matter is added. It is noted that Claims 22 and 23 depend from Claim 1, and are believed to be allowable for at least the reasons discussed above.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Philippe J.C. Signore, Ph.D.
Attorney of Record
Registration No. 43,922

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 03/06)